

CLAIMS

1. An inkjet-imaging device comprising:

staggered printheads;

cleaning units coupled to a service station, each cleaning unit comprising components to service a particular one of the staggered printheads, each cleaning unit being offset from an adjacent cleaning unit to form a staggered cleaning unit configuration; and

a processor coupled to a memory, the memory comprising computer-program instructions executable by the processor for collectively moving one or more of the staggered printheads along a single actuation axis from a respective spittoon in a particular service station to a print zone without colliding with one of the cleaning units.

2. An inkjet-imaging device as recited in claim 1, wherein the computer-program instructions further comprise instructions for collectively moving one or more of the staggered printheads along a single actuation axis to the respective spittoon in the particular service station from the print zone without colliding with one of the cleaning units.

3. An inkjet-imaging device as recited in claim 1, wherein the particular one is selected from a cyan ink printhead, a magenta ink printhead, a yellow ink printhead, or a black ink printhead.

4. An inkjet-imaging device as recited in claim 1, wherein the components comprise a spittoon, a wiper, a capping region, and a solvent dispenser.
5. An inkjet-imaging device as recited in claim 1, wherein the computer-program instructions further comprise instructions, responsive to moving the staggered printheads to the service station, for servicing the staggered printheads with the cleaning units.
6. An inkjet-imaging device as recited in claim 1, wherein each cleaning unit comprises a spittoon, a wiper, a capping unit, and a solvent dispenser, the wiper being positioned adjacent to the capping unit, the capping unit comprising a long and a short axis, a first end of the long axis being positioned adjacent the spittoon region, and a second end of the long axis unit being collinear and adjacent to the solvent dispenser.
7. A printhead cleaning unit for use in an inkjet printing device, the printhead cleaning unit comprising a plurality of components to service a particular one printhead of a plurality of staggered printheads, the components comprising a spittoon, a wiper, a capping unit, and a solvent dispenser, the wiper being positioned adjacent to the capping unit, the capping unit comprising a long and a short axis, a first end of the long axis being positioned adjacent the spittoon region, and a second end of the long axis unit being collinear and adjacent to the solvent dispenser.
8. A printhead cleaning unit as recited in claim 7, wherein the particular one printhead is a printhead comprising cyan, magenta, yellow, or black ink.

9. A method to service printheads in a staggered configuration, the method comprising:

moving a service station pallet to a forward position, the service station comprising printhead cleaning units in a staggered configuration, each cleaning unit comprising a spittoon;

repositioning the printheads into the service station such that each printhead is over a corresponding spittoon; and

spitting ink, by each printhead, into a corresponding spittoon.

10. A method as recited in claim 9, wherein the staggered printheads comprise a cyan ink printhead, a magenta ink printhead, a yellow ink printhead, and/or a black ink printhead.

11. A method as recited in claim 9, wherein the cleaning units further comprise a wiper a solvent dispenser, and a capping unit, and wherein the wiper is positioned adjacent to the capping unit, the capping unit comprising a long and a short axis, a first end of the long axis being positioned adjacent the spittoon region, and a second end of the long axis unit being collinear and adjacent to the solvent dispenser.

12. A method as recited in claim 9, wherein each cleaning unit further comprises a wiper positioned near a second end of the cleaning unit, and wherein the method further comprises moving the service station pallet rearward to wipe each of the printheads clean of any ink residue on a corresponding wiper.

13. A method as recited in claim 9, wherein each cleaning unit further comprises a wiper and a solvent dispenser positioned near a second end of the cleaning unit, and wherein the method further comprises:

moving the service station pallet to a full rearward position such that corresponding solvent nibs are pressing against leading edges of respective staggered printheads, each solvent nib being associated with a respective solvent dispenser; and

delivering solvent to the staggered printheads via the corresponding solvent nibs.

14. A method as recited in claim 9; wherein each cleaning unit further comprises, positioned near a second end of the cleaning unit: a wiper, a solvent dispenser and a capping region, and wherein the method further comprises:

moving the service station pallet to a printhead capping position; and

sealing each of the staggered printheads with a respective cap at a respective capping region.

15. A computer-readable medium to service staggered printheads in an inkjet-imaging device, the computer-readable medium comprising computer-executable instructions for:

moving a service station pallet to a forward position, the service station comprising printhead cleaning units in a staggered configuration, each of the printhead cleaning units comprising a spittoon reservoir;

repositioning the staggered printheads into the service station such that each printhead is over a corresponding spittoon reservoir; and

spitting ink, by each printhead, into a corresponding spittoon reservoir.

16. A computer-readable medium as recited in claim 15, wherein the staggered printheads comprise a cyan ink printhead, a magenta ink printhead, a yellow ink printhead, and/or a black ink printhead.

17. A computer-readable medium as recited in claim 15, wherein the printhead cleaning units further comprise a wiper a solvent dispenser, and a capping unit, and wherein the wiper is positioned adjacent to the capping unit, the capping unit comprising a long and a short axis, a first end of the long axis being positioned adjacent the spittoon region, and a second end of the long axis unit being collinear and adjacent to the solvent dispenser.

18. A computer-readable medium as recited in claim 15, wherein each of the printhead cleaning units further comprise a wiper, and wherein the computer-executable instructions further comprise instructions for moving the service station pallet rearward to wipe each of the printheads clean of any ink residue on a corresponding wiper.

19. A computer-readable medium as recited in claim 15, wherein each of the printhead cleaning units further comprise a wiper and a solvent dispenser, and wherein the computer-executable instructions further comprise instructions for:

moving the service station pallet to a full rearward position such that corresponding solvent nibs are pressing against leading edges of respective staggered printheads, each solvent nib being associated with a respective solvent dispenser; and

delivering solvent to the staggered printheads via the corresponding solvent nibs.

20. A computer-readable medium as recited in claim 15, wherein the computer-executable instructions further comprise instructions for:

moving the service station pallet to a printhead capping position; and

sealing each of the staggered printheads with a respecting cap in a respective capping region.

21. A method for servicing printheads in an inkjet-imaging device, the method comprising collectively moving one or more of staggered printheads along a single actuation axis from a respective spittoon in a particular service station to a print zone without colliding with any portion of a cleaning unit of cleaning units, each cleaning unit comprising components to service a particular one of the staggered printheads, each cleaning unit being offset from an adjacent cleaning unit to form a staggered cleaning unit configuration.

22. A method as recited in claim 21, wherein the particular one printhead is a cyan, magenta, yellow, or a black ink printhead.
23. A method as recited in claim 21, wherein the components comprise a spittoon, a wiper, a capping region, and a solvent dispenser.
24. A method as recited in claim 23, wherein the wiper is positioned adjacent to a short axis of the capping unit, the capping unit comprising a long and the short axis, a first end of the long axis being positioned adjacent the spittoon region, and a second end of the long axis unit being collinear and adjacent to the solvent dispenser.
25. A method as recited in claim 21, wherein the method further comprises collectively moving one or more of staggered printheads along the single actuation axis to the respective spittoon in the particular service station from the print zone without colliding with any portion of a cleaning unit of cleaning units.

26. A computer-readable medium comprising computer-program instructions executable by a processor for servicing printheads in an inkjet-imaging device by:

collectively moving one or more of staggered printheads along a single actuation axis from a respective spittoon in a particular service station to a print zone without colliding with any portion of a cleaning unit of cleaning units, each cleaning unit comprising components to service a particular one of the staggered printheads, each cleaning unit being offset from an adjacent cleaning unit to form a staggered cleaning unit configuration; and

responsive to moving the one or more staggered printheads to the service station, servicing the one or more staggered printheads with the cleaning units.

27. A computer-readable medium as recited in claim 26, wherein the computer-executable instructions further comprise instructions for collectively moving one or more of staggered printheads along a single actuation axis to a respective spittoon in a particular service station from the print zone without colliding with any portion of a cleaning unit of cleaning units.

28. A computer-readable medium as recited in claim 26, wherein the components comprise a spittoon, a wiper, a capping unit, and a solvent dispenser, the wiper being positioned adjacent to the capping unit, the capping unit comprising a long and a short axis, a first end of the long axis being positioned adjacent the spittoon region, and a second end of the long axis unit being collinear and adjacent to the solvent dispenser.

29. An inkjet imaging device comprising:

means for collectively moving one or more of staggered printheads along a single actuation axis to a respective spittoon in a particular service station from a print zone without colliding with any portion of a cleaning unit of cleaning units, each cleaning unit comprising components to service a particular one of the staggered printheads, each cleaning unit being offset from an adjacent cleaning unit to form a staggered cleaning unit configuration; and responsive to moving the one or more staggered printheads to the service station, means for servicing the one or more staggered printheads with the cleaning units.

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30. An inkjet imaging device as recited in claim 29, further comprising means for collectively moving one or more of staggered printheads along the single actuation axis from a respective spittoon in a particular service station to the print zone without colliding with any portion of a cleaning unit of cleaning units.